
Specifications

RS-232 interface

When a High Speed Data Module (HSDM) is used as an RS-232 interface unit, the HSDM replaces an Asynchronous/Synchronous Interface Module (ASIM) completely. The HSDM meets the DTE/DCE interface requirements of the EIA RS-232-C standard. The electrical characteristics of the interface to the Data Line Card (DLC) or to a 4-Port Data Line Card (4PDLC) are the same as for the ASIM.

V.35 interface

The HSDM V.35 interface conforms electrically to the CCITT V.35 standard and mechanically to ISO-2110. When HSDM is used as a V.35 interface unit, an adapter cable is needed to convert the ISO-2110 (DB-25) into an ISO-2593 (34-pin rectangular connector).

The HSDM interfaces with the network through a DLC or 4PDCL.

Telephone interface

A standard 500/2500 telephone, SL-1, or digital set may be connected to the phone jack on the rear of the HSDM telephone ([Figure 4 on page 44](#)). This telephone then operates through the HSDM line cord to a standard 500/2500, SL-1, or Integrated Services Digital Line Card (ISDLC) in the system.

The connection to the DLC or 4PDLC is made via a miniature 6-position jack mounted on the rear of the housing labeled “line.” Two wires are used for digital transmission and four wires may be used to connect to a telephone. The module is equipped with a 7-ft (3.1-m) 6-conductor cord that is terminated with miniature 6-position plugs on each end.

The connection to the power supply is made with a 5-conductor cord equipped with a connector that plugs into the main assembly of the HSDM. The power supply is an integral part of the HSDM and cannot be separated.

Synchronous mode

In Synchronous mode, the HSDM transmits data at 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 40800, 48000, 56000, or 64000 bits per second (bps). These speeds are selected by the synchronous speed switch setting (see [Figures 2 and 3](#) on [page 8](#)).

Asynchronous mode

In Asynchronous mode, the HSDM transmits data at 110, 150, 300, 600, 1200, 2400, 4800, 9600, or 19200 bits per second (bps). The HSDM selects a default of 1200, 2400, 4800, 9600, or 19200 bps as determined by the synchronous switch setting. If the switch is not set to any of these speeds, a default speed of 9600 bps is selected at the start-up of the HSDM. After start-up, speeds and parity are determined by an autobauding and autoparity routine in the firmware.

Power supply

An external power supply is provided for each HSDM. The power supplies are assembled with the units, and it is not recommended to order them separately.

An optional 220 V/50 Hz powered HSDM (A0318291) is available for the international market.

An optional 100 V/50 Hz powered HSDM (A0336890) is available for the Japanese market.

EIA RS-232 leads

Table 1 shows the EIA leads supported by the HSDM.

Table 1
EIA signals supported by HSDM (Part 1 of 2)

Circuit number		HSDM DB-25	Signal source		Abbrev.	Description
EIA	CCITT	Pin No.	DTE	HSDM		
AA	101	1				Protective Ground *
BA	103	2	X		SD	Transmitted Data
BB	104	3		X	RD	Received Data
CA	105	4	X		RTS	Request to Send
CB	106	5		X	CTS	Clear to Send
CC	107	6		X	DSR	Data Set Ready
AB	102	7		X		Signal Ground
CF	109	8		X	CD	Carrier Detect
		9/10				no connection
SBA	118	11	X			Sec. Trans Data
SBB	119	12		X		Sec. Rec. Data
		13/14				no connection
DB	113	15		X	SCT	Received Data
		16				no connection

Table 1
EIA signals supported by HSDM (Part 2 of 2)

Circuit number		HSDM DB-25	Signal source		Abbrev.	Description
EIA	CCITT	Pin No.	DTE	HSDM		
DD	128	17		X	SCR	Received Clock
		18/19				no connection
CD	108.2	20	X		DTR	Data Terminal Ready
		21				no connection
CE	125	22		X	RI	Ring Indicator
CH/CI	126	23	X			Data Rate Select
DA		24	X			External Transmit Clock
BO		25	X			Busy Out **
* Pin 1 is connected to the MCDS shelf frame. ** Pin 25 is connected to an RS-232 receiver on the HSDM, but is ignored by the HSDM controller.						

CCITT V.35 leads

Table 2 shows the CCITT V.35 leads supported by the HSDM. An adapter cable is needed to convert the ISO-2110 (DB-25) into an ISO-2593 (34-pin cable).

Table 2
V.35 CCITT signals supported by HSDM (Part 1 of 2)

V.35 CCITT	HSDM DB-25 Pin No.	Abbrev.	Adapter cable		Signal Source		Description
			DB-25 Pin No.	V.35 Pin No.	DTE	HSDM	
101	1	DG	1	A			Protective Ground *
103A	2	SDA	2	P	X		Transmit Data A
104A	3	RDA	3	R		X	Receive Data A
105	4	RTS	4	C	X		Request to Send
106	5	CTS	5	D		X	Clear to Send
107	6	DSR	6	E		X	Data Set Ready
102	7	S	7	B			Signal Ground
109	8	CD	8	F		X	Carrier Detect
—	9/10	—	9/10	CC/L			no connection
—	11	—	11	K	X		**
115B	12	SCRB	12	X		X	Serial Clock Receive B
103B	13	SDB	13	S	X		Transmit Data B
114B	14	SCTB	14	AA		X	Serial Clock Transmit B
114A	15	SCTA	15	Y		X	Serial Clock Transmit A
104B	16	RDB	16	T		X	Receive Data B

Table 2
V.35 CCITT signals supported by HSDM (Part 2 of 2)

V.35 CCITT	HSDM DB-25 Pin No.	Abbrev.	Adapter cable		Signal Source		Description
			DB-25 Pin No.	V.35 Pin No.	DTE	HSDM	
115A	17	SCRA	17	V		X	Serial Clock Receive A
—	18/19	—	18/19	M/HH			no connection
108.2	20	DTR	20	H	X		Data Terminal Ready
—	21	—	21	EE			no connection
125	22	RI	22	J		X	Ring Indicator
113B	23	SCTEB	23	W	X	X	Tran Sign Elemt Time B
113A	24	SCTEA	24	U	X	X	Tran Sign Elemt Time A
—	25	—	25	MM	X		**
* Pin 1 is connected to the MCDS shelf frame.							
** These leads are ignored by the HSDM controller.							

The HSDM may be placed as far from its associated data terminal or computer port as is consistent with EIA RS-232 or V.35 lead specifications.

Power requirements

The HSDM is powered from an external power supply. The power requirements are as follows:

Voltage	Tolerance	Current	
		Nominal	Maximum
+5 V dc	±5%	1.0 amp	0.8 amp
+12 V dc	±10%	0.2 amp	85 mA
−12 V dc	±10%	0.2 amp	35 mA

A total of 1.0 A is required from the 110 V ac power receptacle.

Environmental

The HSDM is designed to operate without degradation under the following conditions:

Specification	Operating	Storage
Ambient Temperature	0° to 40°C	−40° to 70°C
Relative Humidity (noncondensing)	5% to 85%	0% to 95%

Reliability

The HSDM has a predicted mean time between failures (MTBF) of 10 years at 40 °C.

Figure 4
High Speed Data Module Rear View

